



Mayne Tree Expert Company, Inc.

ESTABLISHED 1931

GRADUATE FORESTER

CERTIFIED ARBORISTS

PEST CONTROL

ADVISORS AND OPERATORS

STATE CONTRACTOR'S LICENSE NO. 276793

RICHARD L. HUNTINGTON
PRESIDENT

August 31, 2004

KEVIN R. KIELTY
OPERATIONS MANAGER

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Mr. Shawn Fritz
StarkweatherBondy
1250 Addison Street, Suite 202
Berkeley, CA 94702

Re: South Peninsula Hebrew Day School, 1030 Astoria Drive, Sunnyvale, CA
Project #0311.00

Dear Mr. Fritz:

I have completed the field work requested by the City of Sunnyvale. This was essentially to provide a specific tree preservation plan for all trees potentially impacted by the proposed construction. They also requested that each tree be appraised. (See enclosed worksheet.)

In order to provide the above information each tree was assigned a number which ties this report to the site plan. Each tree was measured at 54 inches above grade and assessed a condition rating percent as compared to a perfect tree. This rating is a composite of several tree factors: health, structure, presence of insects or disease and other related problem (direct or indirect). The following table gives the percentage range:

0-29 ...Very poor

30-49 ... Poor

50-69 ... Fair

70-89 ...Good

90-100 ... Excellent

This rating, plus the site, placement and contribution percentages, are used in the appraisal formula. The estimate average canopy spread is a guide to protective fencing placement. Trunk diameters for multiple-trunked trees are calculated as follows: The largest trunk diameter is added to half of the diameters of the smaller trunks.

The "Comments" section explains the condition rating, recommended tree care, and construction impact mitigation. Also, general tree protection is discussed, as needed. You will also find comments regarding expected longevity and/or growth and if a tree should be removed due to factors seen or expected, for example: girdling roots, past pruning, past construction impacts, etc.

TREE SURVEY

<u>Tree No.</u>	<u>Species</u>	<u>Size</u> (Inches)	<u>Condition</u> (Percent)	<u>Site</u>	<u>Placement</u>	<u>Contribution</u>	<u>Average</u> <u>Canopy</u>	<u>Comments</u>
1	Plum	11.2	75	90	90	90	15	Leans.
2	Magnolia	10.1	70	90	75	85	12	Surface roots.
3	Magnolia	8.1	60	90	75	85	12	Stressed from lack of water,
4	Magnolia	7.6	60	90	75	85	12	Stressed from lack of water.
5	Magnolia	5.5	55	90	75	85	12	Stressed from lack of water.
6	Magnolia	6.1	65	90	85	85	12	Stressed from lack of water.
7	Magnolia	7.3	75	90	85	85	15	Slightly stressed from lack of water.
8	Magnolia	6.4	75	90	85	85	10	Leans.
9	Redwood	12.5	70	90	85	85	10	Drought stressed.
10	Redwood	16.4	65	90	80	85	12	Drought stressed.
11	Ginkgo	1.4	75	90	80	60	2	Drought stressed.
12	Redwood	19.1	75	90	80	85	12	Drought stressed.
13	Redwood	15.4	85	90	80	85	12	Drought stressed.
14	Ginkgo	2.3	70	90	65	60	4	Suppressed by No. 13.

TREE SURVEY

<u>Tree No.</u>	<u>Species</u>	<u>Size</u> (Inches)	<u>Condition</u> (Percent)	<u>Site</u>	<u>Placement</u>	<u>Contribution</u>	<u>Average</u> <u>Canopy</u>	<u>Comments</u>
15	Ginkgo	3.9	70	90	70	70	6	Multiple tops.
16	Redwood	8.0	70	90	75	65	10	Drought stressed.
17	Coast live oak	25.8	65	90	95	95	25	Forks at DBH, has included bark. Decay apparent on limbs.
18	Coast live oak	15.7, 15.0, 13.1 (29.8)	65	90	90	85	15	Three trunks at 2 feet. Significantly weak Tree has sycamore borers. Suppressed by No. 17.
19	Redwood	14.7	75	90	90	85	10	Drought stressed.
20	Redwood	15.6	70	90	90	85	10	Drought stressed.
21	Redwood	15.4	70	90	90	85	10	Drought stressed.
22	Coast live oak	17.5, 15.1 13.3, 13.1 (31.3)	40	90	90	90	25	Growing in fence. Four trunks at ground trunks at ground level with included bark.
23	Olive	5.0, 5.0, 4.8 (9.9)	80	90	60	70	6	Four trunks at ground level. Limited root area.
24	Almond	10.4	65	90	65	70	10	Leans.
25	Willow	14.9	50	90	50	65	10	Pollarded and has decay,

There are 34 trees included in this report. Of these, only 6 will need to be removed due to construction. It may be prudent to remove other trees (i.e., No. 22) due to specific conditions for individual trees. A general recommendation for trees in construction zones is to deep root fertilize. This can also help mitigate drought stress as observed on several of the trees No's, 3-7, 9-13, 19-21.

Trees numbered 17 and 18 appear to have retaining walls near them (about 2 feet away). Roots will be encountered unless excavation is limited to 2 inches deep within their driplines. Tree protection will only be difficult as there will be no room for access if fencing is placed at 2 feet. Tree No. 22 appears healthy, but it is a volunteer which grew double trunks on each side of the chainlink fencing. The fence is now significantly embedded into the trunk. This is a potentially unsafe situation, as connections between the 4 trunks has been weakened. This could be more of a concern as the tree grows or more targets are added. Thus, it is prudent to remove this tree to eliminate the potential risks.

Protecting the perimeter trees 1-10, 12-14 and 16-21 can be done by erecting 6 foot tall chainlink fencing, strung on steel posts pounded into the ground at the trees' driplines or around groups of trees, i.e. 1-10. Unless design changes are done, Tree No's. 17 and 18 cannot be fenced off at their driplines. If these two trees are retained, install fencing as far from the trunks as possible, still providing adequate access for construction to proceed. It may, however, be prudent to remove these trees as they have only a Fair condition rating.

Tree protection zones for Trees 1-10 can be established with fencing along the sidewalk and parking lot. Tree protection fencing along the north fence can be just placed on the south side of the trees, but closed to limit access. Tree protection zones for Tree No. 28-34 can be along the island curb. These zones shall be off-limits to all construction activity and materials

The recommended mitigation for drought stressed trees is deep root fertilizing. This is best done by using hydraulic spray equipment to inject the fertilizer solution into the root zone. There are potential impacts from after-construction activity, i.e. utilities, irrigation, surface drain, etc. Excavation for these should also remain outside the driplines. . See "Mitigating Measures for Construction Impacts on Existing Trees", enclosed.)

To conclude, the best trees are the redwoods, magnolias and cedars. The oaks appear to be volunteers, especially No. 22. Due to proposed construction and to structural problems, it is prudent to remove No's. 17, 18 and 22.

StarkweatherBondy/Hebrew Day School 8-31-04, Pg. 6

I think this report is accurate and based on sound arboricultural principles and practices.

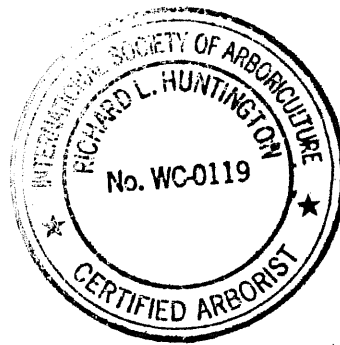
Sincerely,



Richard L. Huntington
Certified Arborist WC #0119
Certified Forester #1925

RLH:dcr

Encls.



THE TRUNK FORMULA METHOD FOR APPRAISING
THE VALUE OF A TREE IN NORTHERN CALIFORNIA
Established by the International Society of Arboriculture

The appraisal of a tree is based on four factors: tree diameter in inches, taken at four and one-half feet above natural grade (known as Diameter Breast Height or DBH), tree species (as compared to an ideal tree), tree condition and tree location. Guidelines for these factors are provided in the publication, *A Guide to Plant Appraisal*, (9th Edition,), published by the International Society of Arboriculture.

Included with your report are one or more worksheets, with all the necessary calculations to determine the value of your tree(s). The following should help to make those calculations more clear. This method is for trees which are not replacable with a similar size.

The basic value of a tree is a set value, based on the cross section in square inches, figured from the DBH. This value is found by multiplying the basal square inches of the subject tree by the value per square inch of a 48 inch boxed specimen of like species. These figures will vary, depending on whether the tree is more or less than 30 inches in diameter.

A 48 inch boxed specimen is the largest commonly available transplantable size, and its costs and cross-sections were standardized for convenience. Since the basic value cross-section is the difference between the tree being appraised and a 48 inch specimen, the average cost to purchase and plant the 48 inch specimen has to be added back before the condition and location factors are used.

The species percent factor relates to how the tree compares to an ideal and perfect tree for this area. This percentage compares the relative benefits and drawbacks of the species. An example of a species that is ideal for the San Francisco Bay Area would be a coast redwood or a coast live oak. Both are listed at 90 percent, plus or minus 10 percent. Species percentages are provided in the *Species Characteristics and Group Assignment*, a book published by the Western Chapter of the International Society of Arboriculture.

The tree condition percent is based on the presence of diseases, insects, structural problems, etc. Age is also taken into account. For instance, if the tree had a trunk disease or exhibited a lack of roots, it would be given a lower condition rating.

Tree location is based on the tree's contribution to the property. This includes, but is not limited to: shading, screening, sound and wind protection, proximity to walkways, driveways and utilities both above and below grade, and environmental attributes, i.e. wildlife habitat, etc. It is expressed as an average of percentages for the site, the contribution and the placement of the tree.

Figuring these percentages into the formula results in the final appraised value of the tree(s).

Note: Remedial repairs and removal costs may add to the appraised loss.

Appraisals of tree and landscape values cannot be out of line with the appraisal of property values and are generally considered to be 20-25% of the property values. Some of these have been factored into the basic value. The individual appraiser has to keep this in mind when figuring the appraisal.

MITIGATING MEASURES FOR CONSTRUCTION IMPACTS ON EXISTING TREES

SECTION I INTRODUCTION

It is an established fact that construction around existing trees will impact the trees to some degree. The degree of impact is largely predicated on the condition of the tree(s) before the construction activity begins. It is therefore important to inspect all trees prior to any construction activity to develop a "tree protection program" based on the species, size, condition and expected impact. A Certified Arborist (International Society of Arboriculture) is suggested for this work. The local University of California Extension or County Farm Advisors Office has the names of local certified arborists.

SECTION II SITE PREPARATION

All existing trees shall be fenced within, at, or outside the dripline (foliar spread) of the tree using the following formula: Five inches in distance from the trunk for every inch in trunk diameter, measured 4.5 feet above the average ground level. Example: a 24 inch diameter tree would have a fence erected 10 feet from the base of the tree ($24 \times 5 = 120 / 12 = 10$). The fencing should not interfere with actual construction, but is intended to redirect unnecessary traffic, and to protect limbs and roots. No storage of materials, unnecessary trenching, grading or compaction shall be allowed within the dripline of the trees.

The fence should be a minimum of four feet high, made of pig wire, snow fence, or cyclone, with steel stakes or pipes as posts.

If the fence is within the dripline of the trees, the foliar fringe outside the fence shall be raised to offset the chance of limb breakage from construction equipment encroaching within the dripline.

All contractors, subcontractors and other personnel shall be warned that encroachment within the fenced area is forbidden without the consent of the certified arborist on the job. This includes, but is not limited to, storage of lumber and other materials, disposed-of paints, solvents or other noxious materials, parked cars, grading equipment and other heavy equipment. The temporary fence shall be maintained until the landscape contractor enters the job and commences landscape construction.

SECTION III GRADING/EXCAVATING

All grading plans that specify grading within the dripline of any tree, or within the distance from the trunk as outlined in SECTION II when said distance is outside the dripline, shall first be reviewed by the certified arborist. Provisions for aeration, drainage, pruning, tunneling beneath roots, root pruning, or other necessary actions to protect the trees, shall be outlined by the arborist.

If trenching is necessary within the area as described above, said trenching shall be undertaken by hand labor. All roots 2 inches or larger shall be tunnelled and smaller roots shall be cut smoothly to the side of the trench. The side of the trench should be draped immediately with two layers of untreated burlap to a depth of 3 feet from the surface. The burlap shall be soaked nightly and left in place until the trench is backfilled to the original level. The arborist shall examine the trench prior to backfilling to ascertain the number and size of roots cut, and to suggest further remedial repairs.

SECTION IV REMEDIAL REPAIRS, PENALTIES

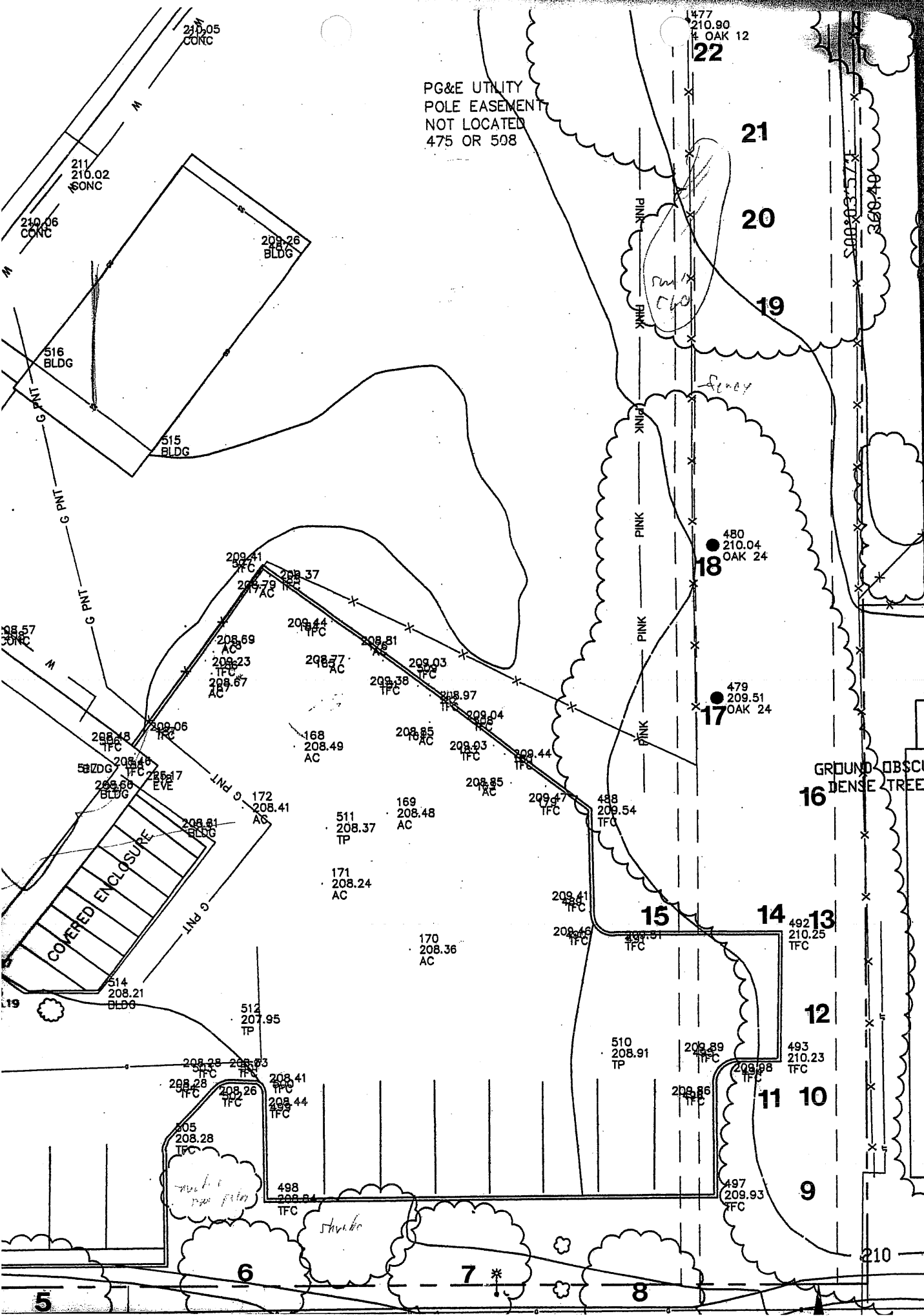
The arborist on the job shall have the responsibility of observing all ongoing activities that may affect the trees, and prescribing necessary remedial work to insure the health and stability of said trees. This includes, but is not limited to, all arborist activities specified in SECTIONS I, II and III. In addition, pruning, as outlined in the "Pruning Standards" of the Western Chapter of the International Society of Arboriculture, shall be prescribed as necessary. Fertilizing, mulching, aeration, irrigation, drainage, pest control and other activities shall be prescribed according to the tree needs, local site requirements and State Agricultural Pest Control laws. All specifications shall be in writing. For a list of licensed pest control operators or advisors, consult the local County Agricultural Commissioners Office.

Penalties, based on the cost of remedial repairs and the appraised values provided in the Evaluation Guide published by the International Society of Arboriculture, shall be assessed for damages to the trees.

SECTION V FINAL INSPECTION

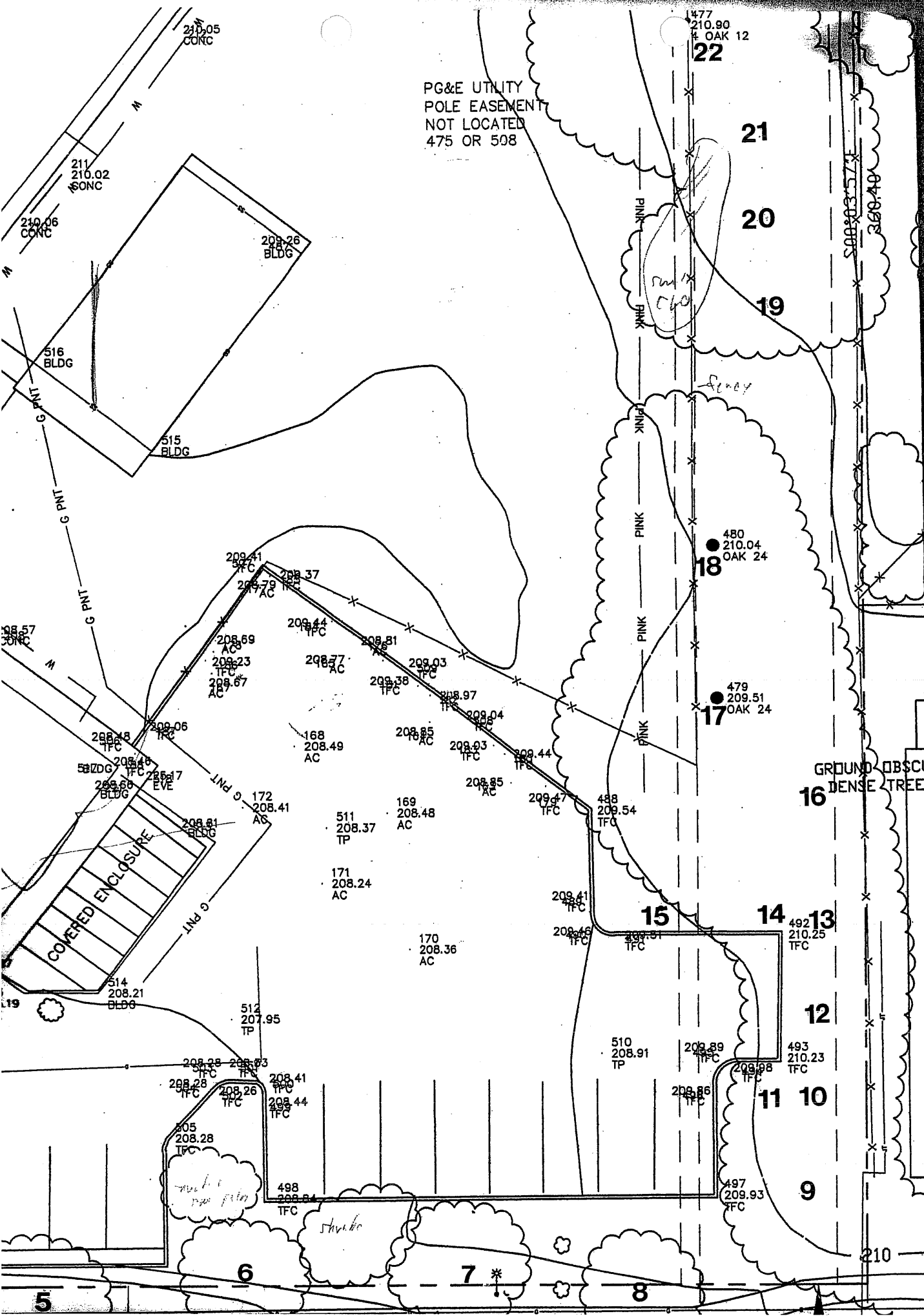
Upon completion of the project, the arborist shall review all work undertaken that impacted the existing trees. Special attention shall be given to cuts and fills, compaction, drainage, pruning and future remedial work. The arborist should submit a final report in writing outlining the ongoing remedial care following the final inspection.

PREPARED BY THE MAYNE TREE EXPERT COMPANY--JANUARY 1, 1994



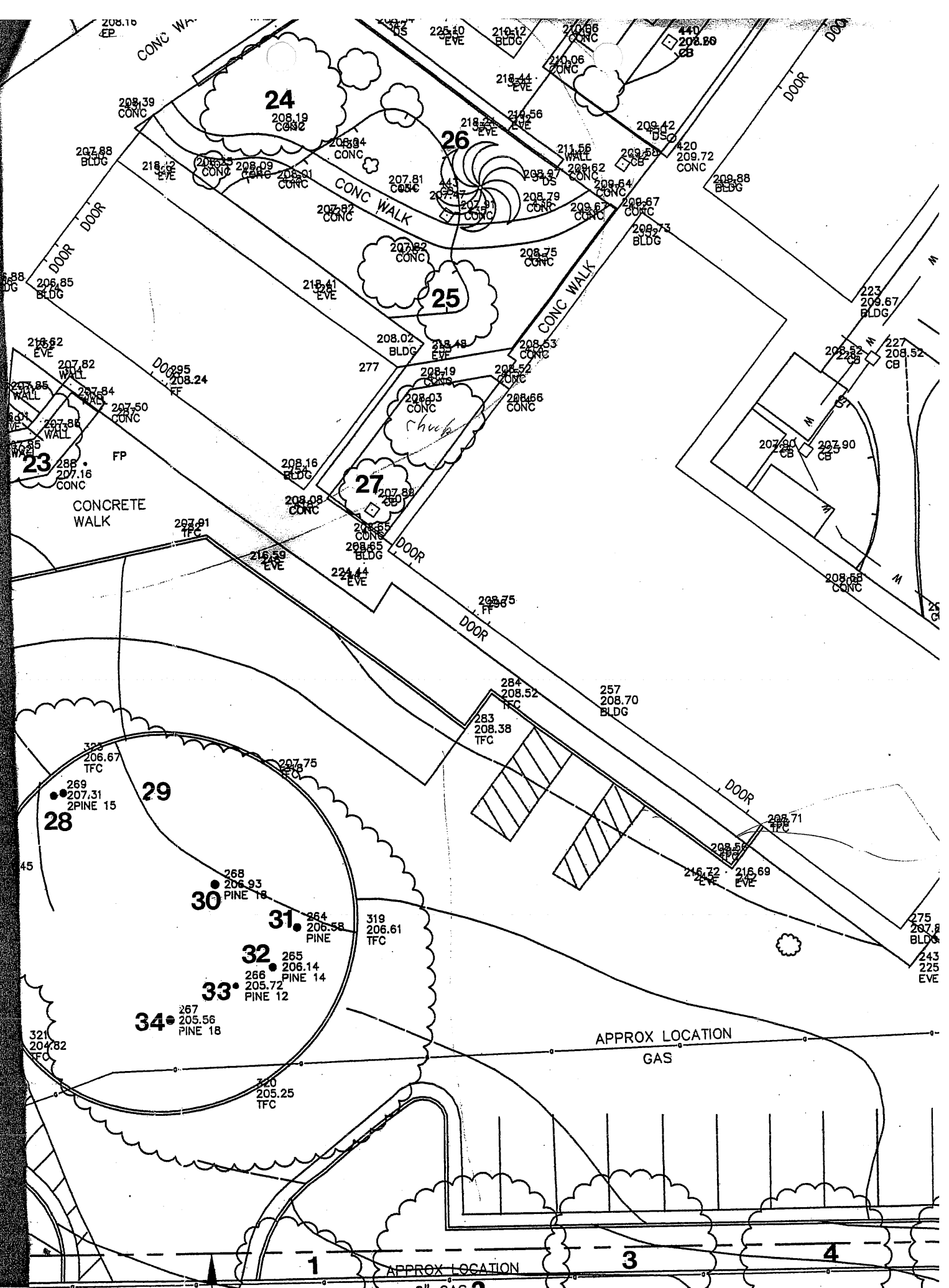
PG&E UTILITY
POLE EASEMENT
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475 OR 508

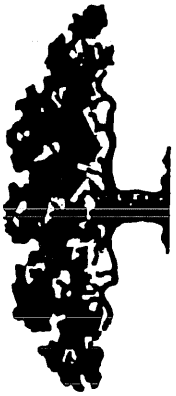
GROUND OBSCURE
DENSE TREE



PG&E UTILITY
POLE EASEMENT
NOT LOCATED
475 OR 508

GROUND OBSCURE
DENSE TREE





StarkweatherBondy
Shawn Fritz
South Peninsula Hebrew Day School
Project #0311.00

Inventory Summary

Client Totals		Tree Count: 34	Value Total	\$110,730.00
Project:		Tree Count: 34	Value Total	\$110,730.00
1	Bilreiana Purple Plum	Diameter: 11.2 in	Aug 5, 2004	Arborist: R. Huntington
	Site: 90	Contrib: 90	Placement: 90	SppRating: 50
2	Southern Evergreen Magnolia	Diameter: 10.1 in	Aug 5, 2004	Arborist: R. Huntington
	Site: 90	Contrib: 85	Placement: 75	SppRating: 90
3	Southern Evergreen Magnolia	Diameter: 8.1 in	Aug 5, 2004	Arborist: R. Huntington
	Site: 90	Contrib: 85	Placement: 75	SppRating: 90
4	Southern Evergreen Magnolia	Diameter: 7.6 in	Aug 5, 2004	Arborist: R. Huntington
	Site: 90	Contrib: 85	Placement: 75	SppRating: 90
5	Southern Evergreen Magnolia	Diameter: 5.5 in	Aug 5, 2004	Arborist: R. Huntington
	Site: 90	Contrib: 85	Placement: 75	SppRating: 90
6	Southern Evergreen Magnolia	Diameter: 6.1 in	Aug 5, 2004	Arborist: R. Huntington
	Site: 90	Contrib: 85	Placement: 85	SppRating: 90
7	Southern Evergreen Magnolia	Diameter: 7.3 in	Aug 5, 2004	Arborist: R. Huntington
	Site: 90	Contrib: 85	Placement: 85	SppRating: 90
8	Southern Evergreen Magnolia	Diameter: 6.4 in	Aug 5, 2004	Arborist: R. Huntington
	Site: 90	Contrib: 85	Placement: 85	SppRating: 90
9	Coast Redwood	Diameter: 12.5 in	Aug 5, 2004	Arborist: R. Huntington
	Site: 90	Contrib: 85	Placement: 85	SppRating: 90
10	Coast Redwood	Diameter: 16.4 in	Aug 5, 2004	Arborist: R. Huntington
	Site: 90	Contrib: 85	Placement: 80	SppRating: 90

Inventory Summary

Tree #									
11	Ginkgo	Diameter: 1.4 in	Aug 5, 2004	Arborist: R. Huntington					\$ 300.00
	Site: 90	Contrib: 60	Placement: 80		SppRating: 30				
12	Coast Redwood	Diameter: 19.1 in	Aug 5, 2004	Arborist: R. Huntington					\$ 5500.00
	Site: 90	Contrib: 85	Placement: 80		SppRating: 90				
13	Coast Redwood	Diameter: 19.1 in	Aug 5, 2004	Arborist: R. Huntington					\$ 6200.00
	Site: 90	Contrib: 85	Placement: 80		SppRating: 90				
14	Ginkgo	Diameter: 2.3 in	Aug 5, 2004	Arborist: R. Huntington					\$ 330.00
	Site: 90	Contrib: 60	Placement: 80		SppRating: 30				
15	Ginkgo	Diameter: 3.9 in	Aug 5, 2004	Arborist: R. Huntington					\$ 400.00
	Site: 90	Contrib: 60	Placement: 80		SppRating: 30				
16	Coast Redwood	Diameter: 8.0 in	Aug 5, 2004	Arborist: R. Huntington					\$ 1470.00
	Site: 90	Contrib: 65	Placement: 75		SppRating: 90				
17	California Live Oak	Diameter: 25.8 in	Aug 5, 2004	Arborist: R. Huntington					\$ 11500.00
	Site: 90	Contrib: 95	Placement: 95		SppRating: 90				
18	California Live Oak	Diameter: 29.8 in	Aug 5, 2004	Arborist: R. Huntington					\$ 14200.00
	Site: 90	Contrib: 85	Placement: 90		SppRating: 90				
19	Coast Redwood	Diameter: 14.7 in	Aug 5, 2004	Arborist: R. Huntington					\$ 3770.00
	Site: 90	Contrib: 85	Placement: 90		SppRating: 90				
20	Coast Redwood	Diameter: 15.6 in	Aug 5, 2004	Arborist: R. Huntington					\$ 3850.00
	Site: 90	Contrib: 85	Placement: 90		SppRating: 90				
21	Coast Redwood	Diameter: 15.4 in	Aug 5, 2004	Arborist: R. Huntington					\$ 3770.00
	Site: 90	Contrib: 85	Placement: 90		SppRating: 90				
22	California Live Oak	Diameter: 31.3 in	Aug 5, 2004	Arborist: R. Huntington					\$ 9600.00
	Site: 90	Contrib: 90	Placement: 90		SppRating: 90				
23	Common Olive	Diameter: 9.9 in	Aug 5, 2004	Arborist: R. Huntington					\$ 980.00
	Site: 90	Contrib: 70	Placement: 60		SppRating: 90				

Inventory Summary

Tree #

24	Almond	Diameter: 10.4 in	Aug 5, 2004	Arborist: R. Huntington	\$ 940.00
	Site: 90	Contrib: 70	Placement: 65	SppRating: 30	
25	Weeping Willow	Diameter: 14.9 in	Aug 5, 2004	Arborist: R. Huntington	\$ 1180.00
	Site: 90	Contrib: 65	Placement: 50	SppRating: 30	
26	Date Palm	Diameter: in	Aug 5, 2004	Arborist: R. Huntington	
	Site: 90	Contrib: 50	Placement: 30	SppRating: 70	
27	Sweet Bay or Laurel	Diameter: 6.0 in	Aug 5, 2004	Arborist: R. Huntington	\$ 1400.00
	Site: 90	Contrib: 70	Placement: 70	SppRating: 70	
28	Deodar Cedar	Diameter: 24.95 in	Aug 5, 2004	Arborist: R. Huntington	\$ 6700.00
	Site: 90	Contrib: 75	Placement: 60	SppRating: 70	
29	Deodar Cedar	Diameter: 3.3 in	Aug 5, 2004	Arborist: R. Huntington	\$ 300.00
	Site: 90	Contrib: 20	Placement: 20	SppRating: 70	
30	Deodar Cedar	Diameter: 18.5 in	Aug 5, 2004	Arborist: R. Huntington	\$ 4060.00
	Site: 90	Contrib: 65	Placement: 75	SppRating: 70	
31	Deodar Cedar	Diameter: 16.2 in	Aug 5, 2004	Arborist: R. Huntington	\$ 2860.00
	Site: 90	Contrib: 60	Placement: 70	SppRating: 70	
32	Deodar Cedar	Diameter: 17.1 in	Aug 5, 2004	Arborist: R. Huntington	\$ 3130.00
	Site: 90	Contrib: 60	Placement: 70	SppRating: 70	
33	Deodar Cedar	Diameter: 14.3 in	Aug 5, 2004	Arborist: R. Huntington	\$ 1820.00
	Site: 90	Contrib: 55	Placement: 60	SppRating: 70	
34	Deodar Cedar	Diameter: 21.9 in	Aug 5, 2004	Arborist: R. Huntington	\$ 6000.00
	Site: 90	Contrib: 75	Placement: 70	SppRating: 70	